

*Energy Notes*, published by the Missouri Department of Natural Resources' Energy Center, is a part of the Energy Efficiency in State Facilities initiative, a joint effort between the Department of Natural Resources, the Office of Administration and other state agencies. The goal of this unique interdepartmental effort is to reduce energy costs for state facilities and their employees by sharing information about improved operations and maintenance procedures, low cost investments, performance contracting and energy efficient design in new facilities. *Energy Notes* is a tool to help state facility managers and staff learn ways to reduce energy cost at work and at home. Future editions will also include information on transportation and residential energy efficiency.

## **Energy Saving Tips for Around the Workplace**

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### **Lighting**

- Turn lights out when leaving a room. If you are gone for more than two minutes, turn out the lights, except for HID fixtures (such as warehouse lighting), which require a warm-up period.
- Wherever practical, use a task light instead of the overhead lighting.
- Use daylighting when available by turning off lights near windows.
- Have maintenance staff delamp fixtures that produce a harsh glare or in areas that are over lit.
- Avoid using incandescent lights when possible. Compact fluorescents use less than one third of the energy and last up to ten times longer.

### **Office Equipment**

- Turn off computer monitors when not in use. Computers come with a sleep mode that is activated through the screen saver control feature.
- Unless your agency updates programs at night, turn off the computer and monitor at the end of the day.
- Make sure the office copier is turned off at night. New copiers with ENERGY STAR<sup>®</sup> features of low power standby are the best choice when replacing machines. Be sure the ENERGY STAR features are activated. Fax machines come with power saver modes as well.

### **Space comfort**

- Move desks and cubicles away from windows. Windows are a source of drafts and draw heat from people in winter, making them feel colder.
- During cool weather, open blinds for light and warmth and close drapes at the end of the day to reduce heat loss at night. In warm weather, close blinds to reduce cooling load.

### **Appliances**

- Turn off power on "optional" equipment/spaces after hours (vending machines, trash compactors, display cases, personal computers, coffee makers, etc.)
- Have the vending machine operator turn off the advertising lighting in machines.

### **Utilities and maintenance**

- Report HVAC/energy-related problems to the appropriate personnel.
- Report any leaks or other water problems (leaky faucets, toilets running, sprinklers that water sidewalks, etc.) to the building operator.
- Develop and maintain an energy accounting system to track utility usage and to identify any abnormality in energy use or billing errors.

## State ENERGY STAR® Buildings

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The results of efforts to improve the energy efficiency of the Department of Natural Resources' office building at 1659 E. Elm were realized February 20, 2003, with the unveiling of the building's ENERGY STAR designation plaque. The building, which is leased to the department by P&G Development Inc., Jefferson City, was recognized for improvements that placed it within the top 11 percent of similar buildings nationwide in energy efficiency.

The efficiency renovations were made to the building at the department's request as part of the lease agreement, and implemented prior to the department's occupancy in March 2000. As a result, energy costs for the 41,500-square-foot building fell from \$2.12 per square foot to \$0.74 per square foot. The renovations at the building included installation of high-efficiency lighting fixtures, motion sensor controls, LED exit signs, ground-source heat pump systems and high-efficiency office equipment. Additional light fixtures were delamped after staff moved in and it was determined that some areas had more than adequate lighting. The energy savings from the upgrades, estimated at \$55,000 annually, are expected to pay for themselves in 11 years. The changes also are expected to eliminate more than 3 million pounds of carbon dioxide, sulfur dioxide and oxides of nitrogen power plant emissions, through a decrease in electricity use.

Other state buildings that have received ENERGY STAR labels include the University of Missouri Columbia's General Services Building and University Hall, both of which received their labels in 1999. MU was the first university in the country to receive this recognition for buildings in the office category. Energy conservation initiatives implemented in these buildings included: installation of compact fluorescent lights, conversion from magnetic to electronic ballasts, replaced DX cooling equipment with a water cooled chiller, converted heating/cooling systems to Variable Volume (VAV), and installed an Energy Management Control System (EMCS). These initiatives reduced energy consumption by 64 percent. The University Hall project resulted in 60 percent reduction in energy use and costs.

Using these buildings as benchmarks, similar improvements can be made in other state buildings, resulting in similar savings. Savings opportunity fluctuates with the variety of state buildings, but if the dedication is there, the results can be as well.

ENERGY STAR recognition is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. For more information see <http://www.energystar.gov/>

## MO Energy Facts

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In 2000 Missouri used 1,659 trillion Btu of energy, which cost \$13.27 billion. This ranks Missouri 22<sup>nd</sup> among the states on consumption and 17<sup>th</sup> on dollars spent. More than 95 percent of the energy used was from resources from outside the state.

## For More Information Contact

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